

**ARIZONA GAME AND FISH DEPARTMENT
HABITAT PARTNERSHIP PROGRAM
HABITAT ENHANCEMENT AND WILDLIFE MANAGEMENT PROPOSAL**

PROJECT INFORMATION

Project Title: Redevelopment of the Mt Fagan Wildlife Water Catchment		Project No. 10-516
Region/GMU: 5/34A	HPC: Tucson	
Project Type: Redevelopment/New Water Catchment		
Project Description: This proposal will provide permanent long-term wildlife water in a major portion of Whitetail deer habitat in northern GMU 34A. The Mt Fagan area represents some of the best Whiteail deer and javelina habitat in the unit. Water, however, is extremely scarce throughout the Mt Fagan area and is only present in earthen stock tanks after a heavy monsoon period and during the winter and early spring months and seldom lasts into May. The project would be completed using an R-panel collection apron and a 7000 gallon storage tank with a standard walk in drinker. A wildlife friendly fence will be installed around the development to exclude livestock. Providing water throughout the range also may potentially increase mule deer and javelina populations which will intern increase hunter opportunity. As stated by Marshal et al. (2006), (water) developments may reduce the need for seasonal movements, make a greater proportion of the range and its forage available to deer, reduce competition for forage in exploited range, decrease risks associated with long-distance movements (e.g., Nicholson et al. 1997, Bleich and Pierce 2001) and, thereby, increase deer abundance (Krausman and Czech 1998).		
Wildlife Species to Benefit: Whitetail deer, javelina, black bear, small game and non-game species		
Possible Funding Partners:		
Implementation Schedule: Beginning: September 1, 2010 Completed: June 30, 2012	NEPA Compliance: (Not Applicable, Memo to File) Completed: Yes <u>X</u> No ____ Projected Completion Date:	

PROJECT FUNDING

SBG Funds Requested: \$31,450
Cost Share Funds: \$30,000
Total Project Costs: \$61,450

PARTICIPANT INFORMATION

Applicant: Mark Frieberg Telephone: (520) 762-8172	Address: Arizona Game and Fish Department 555 N. Greasewood Road Tucson, AZ 85745
AGFD Contact and Phone No. N/A	
Coordinated with: Joe Currie (AGFD), Kent Ellett (Forest Service District Ranger) and Tucson HPC	Date: 4-26-10
Applicant's signature:	Date: September 1, 2010

**SEND COMPLETED APPLICATIONS TO:
AZ Game and Fish Department**

(revised 7-02-2007)

Attn: Game Branch
5000 W. Carefree Highway
Phoenix, AZ 85086
rgregory@azgfd.gov

WAS PROJECT PRESENTED TO THE LOCAL HPC? YES X NO

HAS PROJECT BEEN SUBMITTED IN PREVIOUS YEARS? IF SO WAS IT FUNDED?

No.

NEED STATEMENT/PROBLEM ANALYSIS:

Water developments in southern Arizona that offer year round water for wildlife are extremely important to overall populations, and reproductive success. Mt. Fagan in the Santa Rita Mtns. currently has a very old dilapidated water development built in the 1980's that, does not only not have enough storage (two 400 gallon tanks), but also does not have enough apron surface area to collect rainfall to fill the storage in order to offer wildlife year round water, especially in dry years. Multiple times over the past ten years this catchment, which is based on rainfall amounts, has dried up completely leaving species including whitetail deer, bears, mountain lions, javelina, turkey, along with numerous other mammals and birds with no water to utilize especially during hot summer months when they need it most. Also, relative to the size of the suitable wildlife habitat, there are no other sources of water for wildlife within a reasonable distance. Depending on the dry part of the year, this water source would be the only one available for over 9 square miles, most of the higher elevations of Mt Fagan. If there were a dependable year round source of water for wildlife at this location this would greatly benefit all species and their population numbers as they exist in this area.

The proposed plan, if funded, would be to redevelop a bigger and more sustainable catchment at the same location. This catchment would have a much larger storage tank (almost 10,000 gallons), and a metal collection apron large enough to sustain the new tank in dry years. As this is an excellent remote location for wildlife to occur, there are no roads in the area and this would be completed via helicopter. The cost of materials on this project is about 22,000, along with the cost of a contracted helicopter will be approximately 18,000. This plan would ensure that wildlife would have a dependable year round source of water.

Water is a critical component of any deer habitat, and the upper elevations of the Mt Fagan area turn into seasonal use by Whitetail, javelina and other species, only when water is present. Water has extremely scarce in the Mt Fagan area and is only present in the lower elevation stock tanks after a heavy monsoon period and during the winter and early spring months and seldom lasts into the following May.

PROJECT OBJECTIVES:

- To increase deer and javelina populations by providing dependable, long term, self-sustaining, quality water sources and by increasing the use of otherwise unavailable forage resources
- To increase hunter opportunity
- To install a system that have a long lifespan (40-50 years for storage and collection systems, 25 years for drinking troughs)

- To install a system that does not require supplemental water hauling or major maintenance except in rare or exceptional circumstances
- To install a system that has minimal visual impacts and blend in with surrounding landscape
- To monitor the use of this water source using remote digital game cameras

PROJECT STRATEGIES:

Each project will be completed in one of three ways:

1. Utilize big game special tag funds, personnel from the Arizona Game and Fish Department Development Branch, Papillion Grand Canyon Helicopter Services and approximately 15 volunteers to install this system.
2. Utilize big game special tag funds for the purchase of the system components. Development Branch would only be responsible for supplying 1-2 people for project supervision and for transporting the required supplies and specialized equipment to the site using the helicopter service. Nearly the entire project would be completed with volunteers.

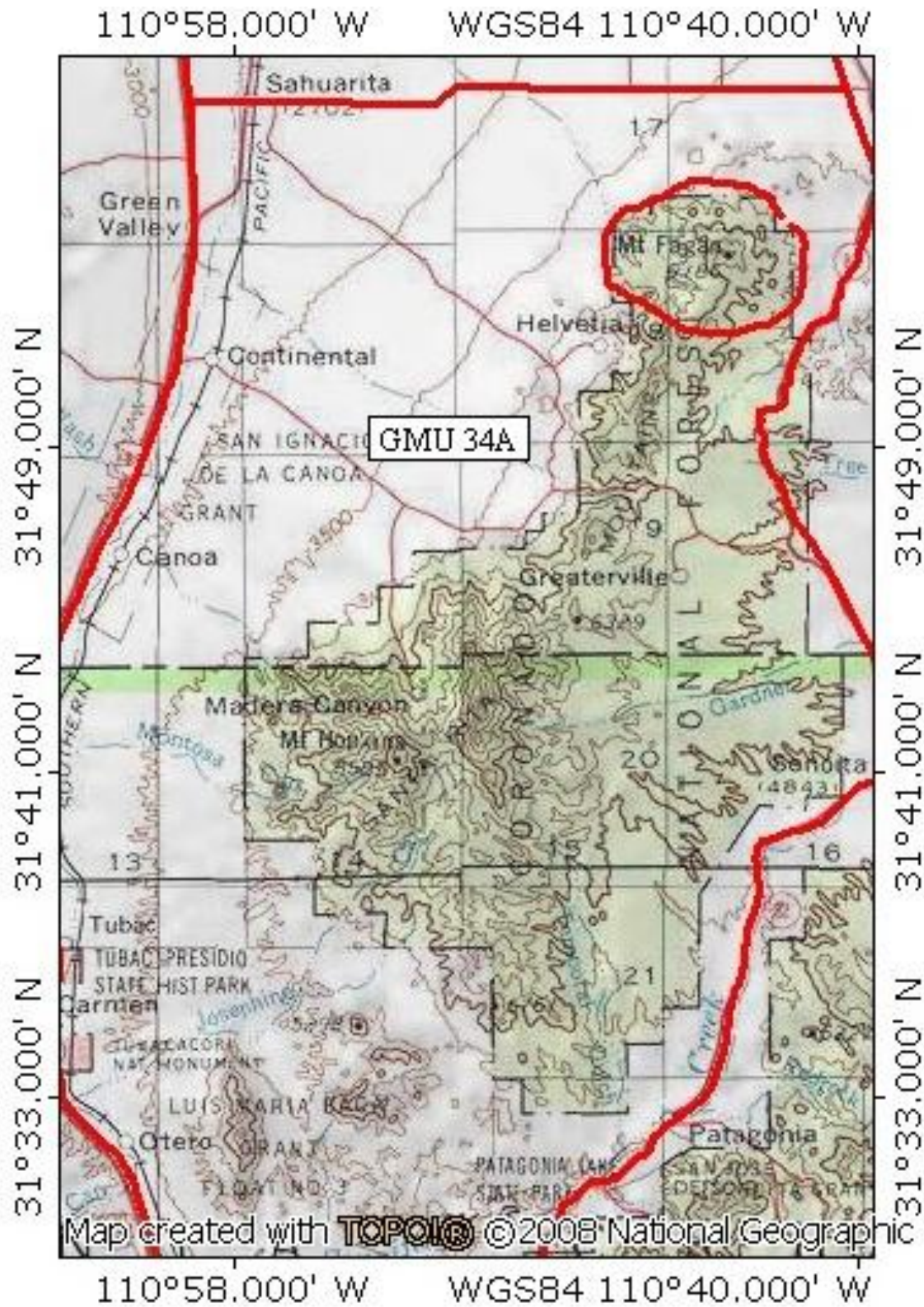
Parts Breakdown

Mt Fagan wildlife water development.

- (1) 3'x20' fiberglass ring tanks
- (1) 3'x4' standard walk-in trough
- (1) 24'x48' R-panel collection apron
- 150'x150' wildlife friendly piperail fence
- Required plumbing components
- Remote digital monitoring camera

PROJECT LOCATION:

The Mt Fagan Area is located in northern central GMU 34A.



LAND OWNERSHIP AT PROJECT SITE (Please state specifically if PRIVATE PROPERTY and provide landowner's name):

The project site is on land administered by the United States Forest Service, Coronado National Forest Nogales Ranger District.

IF PRIVATE PROPERTY, IS THERE A STEWARDSHIP AGREEMENT BETWEEN THE LANDOWNER AND THE DEPARTMENT?

N/A

HABITAT DESCRIPTION:

The two main biotic community types in the vicinity, Sonoran Desertscrub and Oak Woodland, comprise a major portion of the habitat in GMU 34A. The catchment location on Mt Fagan is represented by Madrean Oak Woodland habitat. Common vegetation includes various types of grama grasses (*Bouteloua spp.*), bush muhly (*Muhlenbergia porteri*), arizona white oak (*Quercus arizonica*), mesquite (*Prosopis spp.*), soaptree yucca (*Yucca elata*), beargrass (*Nolina microcarpa*) and fairy feather duster (*Calliandra eriophylla*). Average rainfall is approximately 12-14" and the elevation is 5700'.

ITEMIZED USE OF FUNDS:

Item	Dimensions	Cost	Cost Share	Funds Needed
1-3'x20' fiberglass ring tank (7000g each)	3'x20' each	\$10,650		\$10,650
24'x48' R panel apron	24'x48'	\$3,000		\$3,000
3'x4' walk-in standard trough	3'x4'	\$3,300		\$3,300
Wildlife "friendly" livestock exclosure fence	150'x150'	\$3,000		\$3,000
Plumbing and misc. materials		\$1,000		\$1,000
Tax @ 8.1%		\$1,696		\$1,696
Papillion Helicopter Service		\$20,000		\$20,000
Digital Monitoring Camera		\$500		\$500
Labor- AZGFD and Volunteers		\$20,000	\$20,000	
Freeport McMoran Social Investment Grant			\$10,000	
Total		\$61,450	\$30,000	\$31,450

LIST COOPERATORS AND DESCRIBE POTENTIAL PARTICIPATION:

- Below is an all inclusive list of potential cooperators.
 - AGFD Development Branch: acquire the materials and provide equipment and minimal labor for construction if needed.
 - Arizona Deer Association – volunteer labor and equipment
 - Mule Deer Foundation – volunteer labor and equipment
 - Coues Whitetail.com chat room inquiries – volunteer labor and equipment
 - Tucson HPC: coordinate project funding opportunities

PROJECT MONITORING PLAN:

Remote digital cameras will be used to monitor density and frequency of wildlife water use during the months of May-July if cameras are available. Water levels will be monitored at least twice per year with emphasis during the warmer drier months by the Wildlife Manager. Additional monitoring will be conducted as needed. Minor

(revised 7-02-2007)

maintenance will also be conducted as needed by the Wildlife Manager. The AGFD Development Branch will be responsible for major maintenance issues.

PROJECT MAINTENANCE:

The maintenance of the catchment will continue to be the responsibility of the AGFD. The Wildlife Manager will be responsible for coordinating this.

PROJECT COMPLETION REPORT TO BE FILED BY:

Joe Currie or Mark Frieberg

WATER DEVELOPMENT PROJECTS (see attached worksheet):

TREE SHEARING (AGRA-AXE, PUSH) PROJECTS (see attached worksheet):

ARIZONA GAME AND FISH DEPARTMENT **WATER DEVELOPMENT WORKSHEET**

PROJECT NAME: Mt Fagan Wildlife Water Catchment

- 1) **Is the water development listed as a priority in the most recent “Wildlife Water Development Annual Implementation Schedule?”**
Yes
- 2) **Please list the Development Branch personnel and date coordinated with for this project.**
Joe Currie – 4-26-10
- 3) **What is the estimated annual inches of precipitation for the area? (mark one)**
___2-4 ___4-6 ___6-8 ___8-10 ___10-12 _X_12-14 ___14-16 ___>16
- 4) **Is there a perennial water source available to big game within four miles of this project?**
_X_YES (please complete #5 below) ___NO (skip #5 below)
- 5) **For the accessible, perennial water source nearest this project:**
Name of water source: Fagan Lake
Type of water source (catchment, spring, dirt tank, etc.): Small dirt lake
Ownership of water source: Az State Land
Distance in miles from project: 2.3 miles.
- 6) **Is the target wildlife species a result of transplant efforts?** ___YES _X_NO
- 7) **Please list any special land management status for the project site (i.e. Wilderness, National Park, National Monument, etc). If private land, list landowner.**
N/A
- 8) **Please provide the following information about access to the proposed site:**
Type of access (mark one): ___2x4 vehicles ___4x4 only _X_foot only**
**If foot access only: Distance in miles: 1miles Approx. hiking time: 2hours

-- Does access to this site require crossing private or tribal lands? ___YES _X_NO

-- Please describe any restrictions to public access: The site is a very remote location accessible only by hiking and helicopter.
- 9) **Please list below (or on a separate sheet) the material type and dimensions of each component proposed to be added, modified, or repaired.**
-see next page

Item	Dimensions	Cost	Cost Share	Funds
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				Needed
1-3'x20' fiberglass ring tank (7000g each)	3'x20' each	\$10,650		\$10,650
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Labor- AZGFD and Volunteers		\$20,000	\$20,000	
Freeport McMoran Social Investment Grant			\$10,000	
Total		\$61,450	\$30,000	\$31,450

10) Was a site visit completed? X Yes No

Joe Currie, Aaron Miller, Martin Guerena, Geoff Hossack, Chris McCotter and I conducted a site visit on 4-26-10.